

IN THE CLAIMS:

1. (Currently Amended) A fuel injector having a fuel inlet, a fuel outlet, and a fuel passageway extending from the fuel inlet to the fuel outlet along a longitudinal axis, the fuel injector comprising:

a body having an inlet portion, an outlet portion, and a neck portion disposed between the inlet portion and the outlet portion, the neck portion having a surface defining a portion of the fuel passageway;

an armature adjacent the inlet portion of the body;

a needle operatively connected to the armature;

a seat defining a funnel having a conical end disposed within the body, the seat proximate the needle and having a first face, a second face, and a circumferential surface disposed between the first face and the second face, the circumferential surface including a first zone and a second zone that are connected by an intermediate zone extending substantially perpendicular to the first and second zones, the intermediate zone contiguously engaging ~~the passageway~~ an inner surface of the neck portion of the body, the inner surface being located between the conical end of the funnel and the fuel outlet; and

a seal disposed between the second zone of the seat and the body so that the seal thermally isolates the second zone of the seat from the body.

2. (Original) The fuel injector according to claim 1, wherein the body includes a retention member that engages the intermediate zone of the seat.

3. (Currently Amended) The fuel injector according to claim 2, wherein the retention member includes a the inner surface that engages the intermediate zone of the seat to define a first contact area between the body and the seat.

4. (Original) The fuel injector according to claim 3, wherein the retention member comprises a crimped section on the neck portion and is disposed at the outlet portion of the body.

5. (Canceled)

6. (Canceled)

7. (Original) The fuel injector according to claim 1, wherein the seal comprises polytetrafluoroethylene.

8. (Currently Amended) A body and a seat for a fuel injector having a fuel inlet, a fuel outlet, and a fuel passageway extending from the fuel inlet to the fuel outlet along a longitudinal axis, the body and the seat comprising:

a body having an inlet portion, an outlet portion, and a neck portion disposed between the inlet portion and the outlet portion, the neck portion having a surface defining a portion of the fuel passageway; and

a seat defining a funnel, the funnel having a conical end disposed within the body, the seat having a first face, a second face, and an circumferential surface disposed between the first face and the second face, the circumferential surface including a first zone and a second zone that are connected by an intermediate zone extending substantially perpendicular to the first and second zones, the intermediate zone contiguously engaging ~~the passageway~~ an inner surface of the neck portion of the body, and the second zone being thermally isolated from the body, the inner surface being located between the conical end of the funnel and the fuel outlet.

9. (Currently Amended) The body and the seat according to claim 8, wherein the body includes a retention member having a the inner surface engaging the intermediate zone of the seat, the inner surface of the retention member defining a first contact area between the body and the seat.

10. (Canceled).

11. (Original) The body and seat according to claim 8, further comprising:

a seal disposed between the second zone of the seat and the body, the seal thermally isolating the seat from the body.

12. (Currently Amended) A method of forming a fuel injector having a fuel inlet, a fuel outlet, a fuel passageway extending from the fuel inlet to the fuel outlet along a longitudinal axis, a body having an inlet portion, an outlet portion, and a neck portion disposed between the inlet portion and the outlet portion, the neck portion having a surface defining a portion of the fuel passageway, and a seat defining a funnel, the funnel having a conical end, the seat having a first face, a second face, and a circumferential surface disposed between the first face and the second face, the circumferential surface including a first zone and a second zone that are connected by an intermediate zone extending substantially perpendicular to the first and second zones, the method comprising:

contiguously engaging the intermediate zone of the seat with ~~the passageway~~ an inner surface of the neck portion of the body, the inner surface being located between the conical end of the funnel and the fuel outlet; and

thermally isolating the second zone of the seat from the body.

13. (Original) The method according to claim 12, further comprising:

disposing a seal between the second zone of the seat and the body to thermally isolate the seat from the body.

14. (Original) The method according to claim 12, further comprising:

retaining the intermediate zone of the seat and the body with a retention member.

15. (Previously Presented) The method according to claim 14, wherein the contiguously engaging comprises defining a first contact area between the body and the seat.

16. (Previously Presented) The method according to claim 15, wherein the retaining includes crimping a section on the neck portion that is disposed at the outlet portion of the body.

17. (Previously Presented) The method according to claim 12, wherein the disposing comprises a polytetrafluoroethylene seal.